**IT Applications, Unit 4**

**Ch 4, Goals of information systems, p 137-**

1. What is the role of a strategic plan?

Strategic (long term) Plans are primarily used to identify long-term goals within an organisation, for example for a school a strategic plan may involve; how it intends to maintain or increase the current student enrolment level, introduce new courses, upgrading or establishing of additional buildings.

1. Explain the purpose of a mission statement.

A mission statements (goals) purpose is to create a common set of goals that will assist in accomplishing the organisations aims.

1. Distinguish between an organisations goals and its objectives.

A organisations goals are are similar to mission statement with it being the goals to achieve their aims while a organisations objectives are the small achievable tasks undertaken to complete the goals.

Organisational goals and objectives often relate to improving the efficiency or effectiveness of operations.

**Improving efficiency**

*Efficiency of a solution is its functionality (how it works) of a solution*

*Ie database normalisation, scripts*

*Webpage is effiecent by templates as reduce time required to develop each*

1. How is efficiency measured?

Efficiency is measured as time, cost and effort required to achieve the given task.

1. With an eg. illustrate how an organisational change will lead to improved efficiencies.

A organisation change from physical visiting to utilisation of modern technology methods will boost efficiency ie. for a sale rep to email a newsletter rather than attending each site personally. This is as it lowers time, cost and effort (generally will cover 2, 3 of them)

**Improving effectiveness**

1. How is effectiveness defined?

Effectiveness is best described as when a item has the qualities of; attractiveness, readability, completeness, clarity, accuracy, accessibility, timeliness, communication of message, relevance and hence usability. Ie ensuring data used is relevant to the time the decision is being considered and fit the requirements visually of the end solution creating a clear message among other things.

**Improving decision-making**

1. What three factors are required for competent decision-making?

For competent decisions to be made three main factors must be identified and adhered to, these are; sufficient information, communication and completion in a timely manner.

**Types of information systems**

(You are not required to know for exam purposes the specific types of information systems).

Briefly, note the characteristics of each of the following 5 systems:

1. Transaction processing systems

A transaction processing system or (TPS) are used to process data that is generated in day-to-day transactions. One such example of TPS include but aren’t limited to; a billing system, inventory control and accounts payable. Overtime we have seen the processing change from as a batch at the end of the day to happening in the instance.

1. Office automation systems

Office automation systems are used to perform routine office tasks such as printing, tracking schedules, preforming calculations and communication with other departments and clients. Common software found in this type of system includes word processing, spreadsheets, databases, presentation graphics and electronic mail.

1. Management information systems

A management information systems or MIS refers to a computer network that generates information in a timely and accurate manner for managing an organisation. Often integrated with a TPS, it is generally primarily used to manipulate data from the TPS and generate reports such as reorder, detail or inventory for management to make sound decisions by.

1. Decision-support-systems

A decision-support-system or DSS allows users to manipulate data directly, to incorporate data from external sources and create a data model of ‘what if’ scenarios hence it assists management make non-routine decisions. Hence this system supports decision makers by designing decision models and making queries.

1. Expert systems

Expert systems are designed to analyse data and produce a recommendation or decision. This system is created by inserting the knowledge of an expert by a set of facts or rules into the knowledge base it references. This knowledge base can be stored on a local server or shared publicly over the internet. One such example of a knowledge base is Microsoft’s on their website used to help users experiencing problems to find a solution. The help that this system provides may be easy to obtain however care must be taken as it is acting within set bounds and could hence be void of common sense.

**Problem-solving methodology relating to the analysis of ongoing information problems**

1. What is an information problem?

An information problem is generally more complex than our day-to-day issues and normally will arise when an organisations goals are not being met. The 3 gerneral information problems are stated below as a, b and c.

**Information problems arise because of:**

1. Inefficient procedures
   1. What is meant by this term.

The Inefficient procedures refers to times when the processes we take will impact on the productivity and thus the profitability of the organisation. For example if it takes excessive time to complete tasks, then a problem has occurred as organisation goals haven’t been met. This type can often occur due to a recent change to the system such as a introduction of pay per page ect. this is due to the likely need for a new step in the process that may slow the whole thing down adversely.

1. Failure to meet the needs of users
   1. Why do errors occur in systems?

Errors primarily occur in systems due to human interaction and developmental factors such as computation or selections prone to error, faulty programing, out of date or missing data due to how old it is and lastly unexpected operating circumstances including incompatibility due age, or programs publishers.

1. Problems due to dependence on old technology
   1. What type of opportunities do developments in new technology present?

There are numerous opportunities that new technologies present, these including a simpler and more streamlined process to complete tasks such as gaming making with it now being possible to create a game in a couple of hours with just yourself with little prior knowledge than it was in past times.